Common Bootstrap Package

Presentation to EdgeX Core WG Michael Estrin September 12, 2019



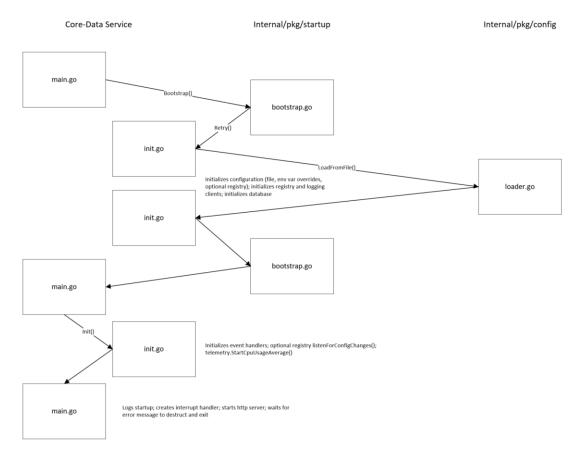
Focus of Spike

Replace existing bootstrap/startup implementation (copy/paste code) with a single extensible package that can be included and used by the core services

Goals

- Single extensible package
- Eliminate code duplication -- consolidate common code from each service's init.go
- Replace internal/pkg/config/loader.go, internal/pkg/startup/*
- Unified approach to concurrency, go routine shutdown and clean up
- Load configuration from file once outside of retry loop
- Improved encapsulation
- Implementation should provide a path forward to remove the global variables currently defined in each core service's init.go and referenced directly throughout the service's implementation

Existing Implementation (simplified)



D&LLTechnologies

Proposed Implementation (simplified)

Core-Data Service

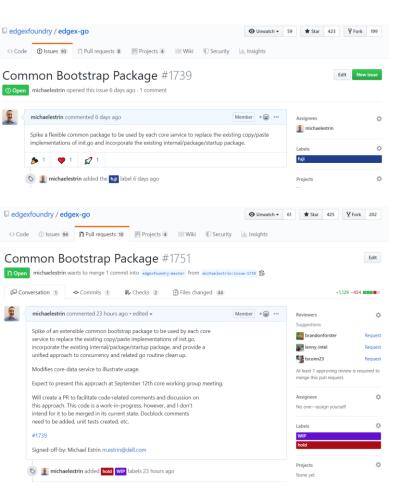
Passes list of bootstrap handlers to be called main.go -Run()_ Creates interrupt handler; initializes configuration (file, env var overrides, optional registry); initializes bootstrap.go registry and logging clients; calls extensible list of BootstrapHandler() bootstrap handlers init.go Service-specific initialization: bootstrap.go updating global variables, optionally initializeClients(), initialize database BootstrapHandler() and spawn clean up go routine Internal/pkg/telemetry/ telemetry.go Self-contained http server execution and clean up bootstrap.go Self-contained StartCpuUsageAverage() Handler() equivalent server.go bootstrap.go Handler() start_message.go bootstrap.go Logs start up messages Waits for go routines created by bootstrap handlers to stop running; leverages context that is cancelled by interrupt handler

Internal/pkg/bootstrap

DCLTechnologies

Spike

- Work-in-progress
 - Code illustrates the approach
 - Only converts core-data
 - Missing DocBlock comments
 - Missing unit tests
 - Extract database-related initialization to common implementation
- edgex-go/issues/1739
- edge-go/pull/1751
- PR intended to facilitate coderelated discussion on approach





Code and Questions



